DRAFT Wetland Water Quality Standards: 3-16-99

SECTION 1. 327 IAC 2-1.8 IS ADDED TO READ AS FOLLOWS:

RULE 1.8. WETLAND WATER QUALITY STANDARDS

327 IAC 2-1.8-1 Definitions

Authority:
Affected:

Sec. 1. The following definitions apply throughout this rule:

(1) "Acid bogs" means those bogs that are located mostly within kettle holes in glacial terrain, with soils composed of sphagnum peat that are saturated with water that has an acidic pH. Water levels fluctuate seasonally. Characteristic plant species include *Sphagnum spp., Thelypteris palustris, Chamaedaphne calyculata,* and *Betula pumila.*

(2) "Acid seeps" means bog-like wetlands typically located in unglaciated hill regions containing a thin layer of muck over a mineral substrate and holding water which during the growing season is lower in temperature than that of other surface waters. Characteristic plant species include *Osmunda cinnamomea, Osmunda regalis, Carex bromoides, Carex lurida, Platanthera clavellata, Aronia melanocarpa, Ilex verticillata, Polygonum arifolium, Impatiens biflora, Dryopteris cristata,* and *Sphagnum spp.*

(3) "Bog" means a classification of wetlands that includes acid bogs and circumneutral bogs.

(4) "Circumneutral bogs" means bog-like wetlands that receive groundwater, contain soils composed of peat or other low nutrient substances, are saturated, and near neutral to slightly acidic in pH. Water levels fluctuate seasonally. Characteristic plant species include *Cornus stolonifera, Rhus vernix, Vaccinium corymbosum, Potentilla fruticosa, Sphagnum spp., Thelypteris palustris,* and *Osmunda spp*.

(5) "Circumneutral seeps" means wetland that are located within circumneutral muck, contain water which during the growing season is lower in temperature than that of other surface waters, and are located on the lower slopes of hills. Characteristic plants species include *Caltha palustris* and *Symplocarpus foetidus*.

(6) "Commissioner" means the commissioner of the department of environmental management.

~~(6)~~ (7) "Compensatory mitigation" means the replacement, enhancement, or restoration of wetlands and their associated uses in compensation for wetlands and their associated uses adversely impacted by a given permitted activity.

~~(7) "Constructed wetland" means an engineered system:~~

~~(A) approved by the agency under 327 IAC 5-2-8, or the Indiana department of health under 410 IAC 6-10;~~

~~(B) that simulates a natural wetland;~~

~~(C) that is designed for the purpose of controlling, preventing, pretreating, or treating any discharge or threatened discharge of wastewater pollutants from a point source; and~~

~~(D) is not constructed in an existing jurisdictional wetland.~~

(8) "Control Document"means an NPDES permit, a § 401 water quality certification, a facility construction permit, an industrial pretreatment permit issued by the Indiana department of environmental management (IDEM), a record of decision issued pursuant to 42 U.S.C. 9601, a commissioner's order, an agreed order, or a consent decree.

(9) "Cypress swamps" means forested areas located in large river bottoms, sloughs, or other related depressions that are permanently inundated, contain very poorly drained soils, and are dominated by bald cypress (*Taxodium distichum*).

(10) "Dune and swales" means a complex of sand dunes divided by low-lying areas referred to as swales that are found adjacent to and near Lake Michigan. Within the swale areas, wet prairies and/or panne-type communities are present, that are composed of wet, calcareous sand and/or muck. Characteristic plant species include *Calamagrostis canadensis, Juncus balticus, Spartina pectinata,* and *Carex spp.*

(11) "Duration" (in regard to inundation/soil saturation) means the length of time during which water stands at or above the soil surface (inundation), or during which the soil is saturated. As used herein, duration refers to a period during the growing season.

(12) "Fens" means calcareous, groundwater-fed wetlands with a muck substrate, seasonally fluctuating water levels, located in the vicinity of glacial moraines. Characteristic plant species include *Andropogon gerardii, Andropogon scoparius, Silphium terebinthinacuem, Potentilla fruticosa, betula pumila, Cornus obliqua,* and *Physocarpus opulifolius.* Forested fens have characteristic plant species including *Acer rubrum, Fraxinus nigra,* and *Larix laricina.*

(13) "Flats (muck and sand)" means shoreline and lake communities located in the northern portion of Indiana. These areas are inundated during periods of high water, and the soils are sandy in composition or have a peat substrate. Characteristic plant species include *Utricularia radiata, Panicum verrucosum, Scleria reticularis, Psilocarya scirpoides, Fimbristylis carolianiana, Xyris caroliniana, Lycopus amplectans, Linum intercursum, Fuiena pumila, Rhynchospora macrostachya,* and *Eleocharis olivacea*.

(14) "Frequency" (in regard to inundation/soil saturation) means the periodicity of coverage of an area by surface water or soil saturation.

(15) "Habitat" means the environment occupied by individuals of a particular species, population, or community.

(16) "Inundated" means a condition in which water from a source temporarily or permanently covers a land surface.

(17) "Marl beaches" means fen-like communities located on fine grained calcareous shorelines of lakes located within the northeastern portion of Indiana that contain a thin layer of water during spring that dries down during summer. Characteristic plant species include *Eleocharis elliptica, Hypericum kalmianum,* and *Potentilla fruticosa*.

(18) "Prevalent vegetation" means the plant community or communities that occur in an area during a given period. The prevalent vegetation is characterized by the dominant macrophytic species that comprise the plant community.

(19) "Primary productivity" means the manufacture of organic, high-energy compounds from inorganic, low-energy constituents by plants and certain bacteria.

(20) "Rare or special concern species" means those species included in the January 22, 1997, database for endangered, threatened, rare and special concern species

maintained by the Indiana Natural Heritage Data Center, Division of Nature Preserves, Division of Natural Resources*.

(21) "Saturated soil conditions" means a condition in which all easily drained voids (pores) between soil particles in the root zone are temporarily or permanently filled with water to the soil surface at pressures greater than atmospheric.

(22) "Seep springs" means a classification of wetlands, including circumneutral seeps and acid seeps, which in general, are groundwater-fed, flow during part of the year, and are located within organic soils.

(23) "Sinkhole ponds means water-containing depressions, generally smaller than four acres, found within areas of karst topography. They normally contain open water and marshy borders. Characteristic plant species include *Glyceria acutiflora* and *Carex decomposita*.

(24) "Sinkhole swamps" means small, semi-permanently flooded areas found within areas of karst topography that contain plants species commonly associated with southern swamps. Characteristic plant species include *Rhynchospora corniculata, Carex decomposita, Carex gigantea, Itea virginica, Ranunculus pusillus,* and *Woodwardia areolata*.

(25) "Threatened or endangered species" means the following species:

(A) Federal endangered and threatened species listed by U.S. Fish and Wildlife Service pursuant to 15 U.S.C. 1533.

(B) State threatened or endangered species listed by the Indiana Department of Natural Resources pursuant to IC 14-22-34.

(26) "Waters of the state" means:

(A) either:

(i) the accumulations of water, surface and underground, natural and artificial, public and private including, but not limited to, lakes, rivers, streams and wetlands; or

(ii) a part of the accumulations of water; that are wholly or partially within, flow through, or border upon Indiana.

(B) the term does not include:

(i) a private pond; or

(ii) an off-stream pond, reservoir, or facility~~, including a constructed wetland,~~ built for reduction or control of pollution or cooling of water before discharge;

unless the discharge from the pond, reservoir, or facility~~, including a constructed wetland,~~ causes or threatens to cause water pollution.

(27) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. ~~This term does not include "constructed wetlands".~~

*** IBR.** *(Water Pollution Control Board; 327 IAC 2-1.8-1)*

327 IAC 2-1.8-2 Antidegradation ~~implementation procedures for wetlands~~ <u>standards for wetlands</u>

Authority:

Affected:

Sec. 2. (a) Designated uses for Tier I and Tier II wetlands shall be maintained and protected so that impacts do not result in ~~any~~ a net loss of wetland acreage or uses except as provided by this section.

(b) Whenever an activity that requires a control document that will impact a wetland, other than a wetland that has been designated as an Outstanding State Resource Water (OSRW) or an Outstanding National Resource Water (ONRW), the wetland will be classified as a Tier I or a Tier II wetland based upon the wetland's sensitivity to disturbance, rarity, and its potential to be adequately compensated by wetland mitigation. The following procedure shall be used to classify Tier I and Tier II wetlands:

(1) Tier I wetlands include all wetlands not included in the Tier II wetland category.

(2) Tier II, high quality wetlands, are any of the following specific types of wetlands:

(A) A wetland where the department of natural resources has documentation of a listed species. If a qualified expert submits a demonstration to the department of environmental management management showing that the wetland does not contain suitable habitat to support the listed species, then the wetland is not a Tier II wetland.

(B) A wetland located within one half mile radius of a site where the presence of a listed species has been documented by IDNR unless:

(i) the wetland does not contain suitable habitat to support the listed species; or

(ii) impacts to the wetland will not adversely affect the listed species.

(C) ~~Wetlands where state or federal threatened or endangered species are found on a permanent or seasonal basis.~~

~~(B)~~ Cypress swamps.

~~(C)~~ (D) Bogs.

~~(D)~~ (E) Fens.

~~(E)~~ (F) Dune and swales.

~~(F)~~ (G) Muck flats.

~~(G)~~ (H) Sinkhole ponds.

~~(H)~~ (I) Sinkhole swamps.

~~(I)~~ (J) Sand flats.

~~(J)~~ (K) Seep springs.

~~(K)~~ (L) Marl beaches.

(Water Pollution Control Board; 327 IAC 2-1.8-2)

327 IAC 2-1.8-3 Wetland antidegradation implementation procedures

Authority:

Affected:

Sec. 3. ~~(c)~~ (a) Wetland antidegradation review requirements ~~are established~~ shall be according to the following:

(1) For a Tier I wetlands~~. The~~ a designated uses ~~of a Tier I wetland~~ shall be maintained and protected, and no degradation shall be allowed unless it is demonstrated that:

(A) there is no practicable alternative, based on technical, social, and economic criteria, that would have less adverse impact on the wetland ecosystem, so long as the alternative does not have other significant adverse

environmental impacts;

(B) the impact would not result in significant degradation to the aquatic ecosystem, as determined in accordance with 40 CFR Part 230.10 (c);

(C) appropriate and practicable steps will be taken to minimize potential adverse impacts on the wetland ecosystem;

(D) storm water and water quality controls will be installed in accordance with subsection (d); and

(E) compensatory mitigation shall be performed to replace the existing wetland and its uses with a wetland of the same type that supports uses equal to or higher than existing uses of the impacted wetland, unless it is determined to be unnecessary by the commissioner due to there being no significant detrimental impact to the water quality. The commissioner may require that the compensatory mitigation be completed and approved prior to the initiation of the activity causing the impact to the wetland.

(2) For a Tier II, high quality wetland, the following requirements ~~are applicable~~ shall apply:

(A) The designated uses of a Tier II wetland shall be maintained and protected and no degradation shall be allowed unless it is demonstrated that:

(i) there is no practicable alternative, based on technical, social, and economic criteria, that would have less adverse impact on the wetland ecosystem, so long as the alternative does not have other significant adverse environmental impacts. Practicable alternatives are presumed to be available for a Tier II wetland unless it is clearly demonstrated otherwise;

(ii) appropriate and practicable steps will be taken to minimize potential adverse impacts on the wetland ecosystem;

(iii) the impact will not result in significant degradation to the aquatic ecosystem, as determined in accordance with 40 CFR Part 230.10(c);

(iv) storm water and water quality controls will be installed in accordance with subsection (d);

(v) compensatory mitigation shall be performed to replace the existing Tier II wetland and its uses with a wetland of the same type that supports uses equal to or higher than existing uses of the impacted wetland; if mitigation is not practicable, impacts to Tier II wetlands shall not be permitted; and

(vi) if mitigation is allowed, it shall be completed and approved by the commissioner prior to the initiation of the activity causing the impact to the wetland.

(B) In addition to the provisions under clause (A), the applicant must demonstrate that the proposed degradation is necessary to accommodate important social and economic development in the area in which the water body is located.

(C) Upon receipt of an application containing an antidegradation demonstration, the commissioner shall provide notice, and schedule and hold a public meeting on the application in accordance with 327 IAC 5-2.1-3.

~~(d)~~ (b) For ~~all classes of wetlands~~ a Tier I and II wetland, the following shall be met:

(1) Appropriate storm water control measures shall be installed to ensure that the

peak post-development rate of surface water runoff (based on a ten (10) year/ twenty-four (24) hour storm) from the impacted wetland does not exceed the peak pre-development rate of runoff (based on a ten (10) year/ twenty-four (24) hour storm) from the impacted wetland; and

(2) Water quality improvement measures shall be incorporated into the design of the storm water control measures to the maximum extent practicable and may include, but are not limited to, the following:

(A) Oil and grease skimmers.

(B) Vegetative buffer strips.

(C) Best management practices.

~~(e)~~ (c) In addition to the other provisions of this section, the commissioner shall consider the following in determining whether an impact to a wetland shall be permissible:

(1) The use or uses that a wetland provides.

(2) The anticipated impact of the proposed loss of ~~any~~ wetland acreage that:

(A) permanently or seasonally contains a state or federal threatened or endangered species; or

(B) provides habitat for a state or federal threatened or endangered species.

(3) Water quality impacts, including the cumulative impacts in a watershed, that may be a consequence of approving a request to degrade a wetland.

~~(f)~~ (d) A wetland~~s~~ impacted without prior authorization from the commissioner shall be considered a Tier II wetland, unless, based on information provided by the applicant showing the condition of the wetland before it was impacted, the commissioner determines that the wetland was a Tier I wetland. The information provided by the applicant showing the wetland prior to impact may include, but is not limited to, the following:

(1) Adjacent vegetation.

(2) Photographs.

(3) National inventory maps.

(4) Public information and comments.

(5) On-site inspections.

(6) Previous site descriptions.

(7) Soil maps.

(8) Data provided in accordance with the determination procedures for atypical situations outlined in Section F of Part IV of the U. S. Army Corps of Engineers Technical Report Y-87-1.

(9) Other information the commissioner may request in order to make the determination regarding the wetland's pre-degraded classification.

~~(g)~~ (e) For a wetland~~s~~ that ~~have~~ has been designated as an outstanding state resource water (OSRW) or outstanding national resource water (ONRW), the commissioner shall ensure that no degradation of the OSRW or the ONRW occurs. To ensure this no degradation standard is met, wetland impacting activities that require a control document shall be prohibited with the exception that a short term, temporary impact of an OSRW or ONRW may be allowed if the following conditions are met:

(1) The impact will last less than twelve (12) months.

(2) The person intending to cause the impact, applies to the department for authorization for a short term, temporary impact.

(3) The person provides justification for the short term temporary impact to the satisfaction of the commissioner.

(Water Pollution Control Board; 327 IAC 2-1.8-3)

327 IAC 2-1.8-4 Wetland designated uses

Authority: IC 13-14-8; IC 13-14-9; IC 13-18-3
Affected: IC 13-18-4; IC 13-30-2-1

Sec. 4. All wetlands are designated to include the following uses as applicable:

(1) Habitat for aquatic organisms including, but not limited to, fish, crustaceans, mollusks, insects, annelids, planktonic organisms.

(2) Habitat for wetland flora.

(3) Habitat for resident and transient wildlife species including, but not limited to, water dependent mammals, birds, reptiles, and amphibians.

(4) Surface and ground water movement that may include, but is not limited to, the maintenance of low water stream flow, ground water discharge, ground water recharge, peak flow suppression, and flood water storage.

(5) Bank and shoreline protection against erosion.

(6) Recreational, cultural, educational, scientific, and natural aesthetic uses.

(7) Primary productivity.

(Water Pollution Control Board; 327 IAC 2-1.8-4)

327 IAC 2-1.8-5 Minimum water quality criteria for wetlands

Authority: IC 13-12-3-1; IC 13-14-8; IC 13-14-9; IC 13-18-3; IC 13-18-4
Affected: IC 13-18; IC 13-30-2-1

Sec. 5. (a) In addition to the other applicable criteria in this rule, the criteria in this section are applicable at all times and places within a wetland.

(b) Hydrological conditions necessary to support the biological and physiological characteristics present in each specific wetland shall be protected. In addition, the following wetland characteristics shall be maintained including, but not limited to, the following:

(1) Natural water temperature variations.

(2) The chemical, nutrient, and dissolved oxygen regime of the wetlands.

(3) The normal movement of aquatic fauna.

(4) The natural pH range of the wetland.

(5) Normal water flows, levels, or elevations.

(6) Normal extent and duration of saturation and inundation.

(c) Water quality necessary to support existing habitats and the populations of water dependant flora and fauna shall be protected to prevent significant adverse impacts on the following:

(1) Food supplies for aquatic life and wildlife.

(2) Reproductive and nursery areas.

(3) Dispersal corridors.

(Water Pollution Control Board; 327 IAC 2-1.8-5)

327 IAC 2-1.8-6 Criteria to classify wetlands as outstanding state resource waters (OSRW) and outstanding national resource waters (ONRW)

Authority: IC

Affected:

Sec. 6. (a) A wetland may be recommended for designation as an outstanding state resource water (OSRW) if ~~either subdivision (1) or (2)~~ one (1) of the following is met:

(1) The wetland supports a special wetland community or a threatened or endangered species. This status of supporting a special wetland community or threatened or endangered species is determined if one (1) of the following is met:

(A) The wetland has been determined to be ~~any~~ one (1) of the following state or globally rare, threatened, or endangered wetland community type:

(i) Cypress swamps.

(ii) Bogs.

(iii) Fens.

(iv) Dune swales.

(v) Muck flats.

(vi) Sinkhole ponds.

(vii) Sinkhole swamps.

(viii) Sand flats.

(ix) Seep springs.

(x) Marl beaches.

(B) The wetlands ~~where~~ has a state or federal threatened or endangered species ~~are~~ found on a permanent or seasonal basis.

(2) Four (4) out of the following six (6) conditions occur in the wetland:

(A) At least eighty (80) percent of the wetland species considered characteristic of the community type are present.

(B) State rare or special concern species are found in the wetland on a permanent or seasonal basis.

(C) There is a lack of significant anthropogenic degradation, damage, or alteration to the wetland.

(D) Invasive exotic species cover less than 10% of the wetland area.

(E) There is a lack of significant alteration of adjacent slopes and surrounding uplands from agricultural, residential, business, or industrial activities.

(F) The wetland is located wholly or partially within or adjoining to the following types of managed lands:

(i) Public land managed for conservation or land dedicated as a state nature preserve.

(ii) Registered natural area.

(b) Any wetland that meets the conditions for being recommended for designation as an outstanding state resource water (OSRW) and is a resource that has national significance or value may be designated as an outstanding national resource water (ONRW). An ONRW includes wetlands that are recognized as important because of protection through official action such as:

(1) federal or state law;

(2) presidential or secretarial action;

(3) international treaty; or

(4) interstate compact.

(Water Pollution Control Board; 327 IAC 2-1.8-6)

327 IAC 2-1.8-7 Procedures to list a wetland as an outstanding state resource water (OSRW) or outstanding national resource water (ONRW)

Authority: IC

Affected:

Sec. 7. (a) A wetland may be recommended to the board for designation as an outstanding state resource water (OSRW) or outstanding national resource water (ONRW) through one (1) of the following procedures:

(1) The board receives a proposal for designation pursuant to IC § 13-14-8-5 on an application form consistent with the form described in subsection (b).

(2) The commissioner decides to commence a rulemaking before the board.

(3) An interested party submits a nomination to the commissioner pursuant to the procedures set forth in subsection (b) and within ninety (90) days from the closing date of the period for nomination, the commissioner determines if the nomination has merit.

(b) In March of each year, the commissioner shall publish a notice in the *Indiana Register* announcing that interested parties may submit nominations for water bodies to be considered for designation as OSRW or ONRW. ~~All~~ A nominations shall be:

(1) ~~be~~ received by the commissioner within sixty (60) days after publication of the notice;

(2) ~~be~~ submitted on the application form published in the *Indiana Register*.

(3) ~~be~~ completed with available information that supports the designation of the nominated water body, including information that shows that the water body meets the applicable prerequisites for designation that are specified in section ~~(Section entitled "Criteria to classify wetlands as OSRW and ONRW.)~~ 6.

(c) If the board receives a proposal for designation pursuant to subsection (a)(1) or if the commissioner decides to commence a rulemaking pursuant to subsection (a)(2) or subsection (a)(3), then the commissioner shall do the following:

(1) Prepare a detailed analysis of the potential designation that at a minimum shall include the following information:

(A) A specific delineation of the boundaries of the water body and of the watershed area that would be affected by the applicable implementation procedures.

(B) A detailed discussion of the reason or reasons that the waterbody is being proposed for special designation.

(C) A detailed description of the procedures that will be followed by the commissioner and by the board in considering whether the waterbody should be designated.

(D) A comparison of the existing antidegradation requirements of a waterbody to all potential antidegradation requirements applicable to that waterbody if successfully designated as an OSRW or an ONRW.

(2) Publish an announcement of the consideration of rulemaking by giving notice in

the newspaper with the largest daily circulation in the county or counties in which the watershed of the water body being considered for designation is located. The notice shall discuss the availability of the detailed analysis required under subdivision (1) and include the summary document required under subdivision (3).

(3) Prepare a summary document of the detailed analysis required under subdivision (1) that shall be mailed, using certified mail with return receipt requested, to the following parties within thirty (30) days of completion of the analysis:

(A) All interested parties that have requested notice of proposed designations.

(B) All local government units affected by the designation and implementation procedures.

(C) All NPDES permit holders affected by the designation and the implementation procedures.

(D) All property owners adjacent to the wetland under consideration for designation as an OSRW or ONRW.

(4) Take one (1) of the following actions, as applicable, within ninety (90) days after mailing the summary document required by subdivision (3):

(A) If proceeding pursuant to subsection (a)(1), submit the analysis and summary developed in subdivisions (1) and (3) along with a recommendation to the board.

(B) If proceeding pursuant to subsections (a)(2) or (a)(3) and based upon the analysis and summary developed in subdivisions (1) and (3), publish a notice regarding the specially designated waterbody in the Indiana Register pursuant to IC 13-14-9-7.

(Water Pollution Control Board; 327 IAC 2-1.8-7)